

INDIANA TRAFFIC SAFETY FACTS

May 2007



YOUNG DRIVERS 2006

Ages 15 to 20

Designing and implementing effective traffic safety policies requires data-driven analysis of traffic accidents. To help in the policy-making process, the Indiana University Center for Urban Policy and the Environment is collaborating with the Indiana Criminal Justice Institute to analyze data from the Vehicle Crash Records System database, maintained by the Indiana State Police. Research findings will be summarized in a series of Fact Sheets on various aspects of traffic accidents, including alcohol-related crashes, light trucks, large trucks, speeding, children, motorcycles, occupant protection, and young drivers. Additional briefs will provide information on county and municipality data. Portions of the content in these reports are based on guidelines provided by the U.S. National Highway Traffic Safety Administration (NHTSA). These Fact Sheets, combined with an annual Indiana Crash Fact Book, serve as the analytical foundation of traffic safety program planning and design in Indiana.



Motor vehicle collisions are the leading cause of death for young people (ages 15 to 20) in the United States.¹ In 2006 in Indiana, this age group represented nine percent of the population, seven percent of licensed drivers, and 18 percent of drivers involved in collisions. Possible contributing factors to the over-representation in collisions are a lack of driving experience, risky driving behavior (especially among males), in-vehicle distractions, and impaired driving.² This fact sheet analyzes young driver involvement in collisions in Indiana from 2003 to 2006, including injury trends, driver contributing factors, restraint use, and alcohol involvement.³ Also included is a review of driver licensing standards and county comparisons of young driver involvement. Collision data are taken from the Indiana State Police Vehicle Crash Records System and the Fatality Analysis Reporting System (FARS) of the National Highway Traffic Safety Administration (NHTSA).⁴

Trends in collisions involving young drivers

From 1997 to 2005, young driver fatalities decreased 32 percent (106 to 82) in Indiana.⁵ The involvement rate of young drivers in fatal collisions (the number involved per 100,000 licensed young drivers) decreased 33 percent (80.5 to 54.3). This improvement was twice that of the Great Lakes Region and six times that of the United States; however, year-to-year fatalities per 100,000 licensed young drivers in Indiana, in general, exceeded those of the larger regions (see Table 1).

In Indiana in 2006, 17.5 percent (51,887) of drivers involved in collisions were under the age of 21. Of 1,235 drivers in fatal collisions, 14.5 percent (179) were young drivers. These proportions exceeded those at the national level - in 2005, 16.0 percent of drivers in all collisions and 12.6 percent of drivers in fatal collisions were under the age of 21.⁶ Per 100,000 licensed age-cohort drivers, three times more young drivers were involved in fatal collisions than older drivers (58 versus 21).⁷ Although multiple-vehicle collisions

¹National Center for Health Statistics, National Vital Statistics System (2003)

²National Highway Traffic Safety Administration (NHTSA). (2007). *Traffic safety facts, laws – Graduated driver license system*. U.S. Department of Transportation. Washington, DC. 2006. (DOT HS 810 727W)

³Indiana law prohibits 15 year-olds from obtaining a driver license but does allow the use of a learner permit. This age group is included here to conform to national analysis standards and to reflect their impact on collisions.

⁴The Indiana State Police Vehicle Crash Records System (VCRS) is now the Automated Reporting Information Exchange System (ARIES), incorporating other types of reports related to traffic collisions. Data for this fact sheet are current as of April 9, 2007.

⁵National Highway Traffic Safety Administration. Fatality Analysis Reporting System (FARS). 2007.

⁶National Highway Traffic Safety Administration. (2005). *Traffic safety facts, 2005 – Young drivers*. U.S. Department of Transportation. Washington, DC. 2006. (DOT HS 810 630)



Table 1: Young drivers in fatal collisions, per 100,000 licensed young drivers, 1997-2006

Region	1997	1998	1999	2000	2001	2002	2003	2004	2005	% change 1997-2005	2006
Young drivers involved in fatal collisions											
Indiana	80.5	67.5	75.1	62.8	64.0	51.0	59.9	68.4	54.3	-32.5	57.6
Great Lakes*	53.6	56.2	59.7	56.7	53.9	54.9	53.2	50.1	45.5	-15.2	n/a
United States	62.5	62.2	64.6	63.3	64.6	66.2	63.4	63.1	59.3	-5.2	n/a
Young drivers fatally injured											
Indiana	39.5	34.2	35.9	28.2	31.4	27.3	27.4	32.9	26.8	-32.1	28.7
Great Lakes*	24.3	24.6	26.2	24.3	24.7	25.8	24.3	22.8	21.3	-12.4	n/a
United States	26.4	26.7	28.1	27.9	28.7	30.6	29.4	28.9	27.5	4.2	n/a

Notes: *Defined as Indiana, Illinois, Michigan, Minnesota, Ohio and Wisconsin

Sources: 1997-2005: Fatality Analysis Reporting System; Federal Highway Administration, *State Transportation Statistics*

2006: Indiana State Police Vehicle Crash Records System, April 9, 2007; Indiana Bureau of Motor Vehicles, February 12, 2007

occurred more frequently, the proportion of young drivers was higher in single-vehicle collisions (19.6 percent). In collisions with property damage only, 17.7 percent (34,360) of drivers were younger than 21 (see Table 2). Almost twice as many males (112) were involved in fatal collisions as females (66) (not shown in Table 2).

From 2003 to 2006, young driver incapacitating and non-incapacitating injuries decreased, whereas fatalities generally increased (see Table 3). Among drivers younger than 21, fatalities grew 7.2 percent to 89 in 2006, incapacitating injuries decreased 22.8 percent to 382, and minor injuries decreased 7.1 percent to 6,712. The proportion of all injuries incurred by young drivers decreased in all injury categories, most significantly in incapacitating injuries (-12.4 percent).⁸

Contributing circumstances and risk factors

An analysis of citations issued to drivers involved in collisions in Indiana corroborate research findings that errant and risky driving and licensing violations are frequent among young drivers.⁹ Based on Indiana collisions in 2006, 515 young drivers were issued citations for speeding violations, 1,615

Table 2: Drivers in Indiana collisions, by collision type, 2006

Drivers in...	Count*			Percentage		per 100,000 licensed age-cohort drivers	
	All ages**	<21	21+	<21	21+	<21	21+
All collisions	296,523	51,887	243,111	17.5	82.0	16,705	4,850
Single vehicle collisions	58,005	11,391	46,255	19.6	79.7	3,667	923
Multiple vehicle collisions	238,518	40,496	196,856	17.0	82.5	13,038	3,927
Fatal collisions	1,235	179	1,054	14.5	85.3	58	21
Killed	607	89	517	14.7	85.2	29	10
Surviving	628	90	537	14.3	85.5	29	11
Injury collisions	66,836	12,128	54,361	18.1	81.3	3,905	1,084
Property damage collisions***	193,907	34,360	158,632	17.7	81.8	11,062	3,164

Notes: *Counts include only those drivers for whom a valid age and vehicle type were entered on the collision report

**Includes drivers with invalid or missing gender code and may not equal the sum of the < 21 and 21+ columns

***Defined as a collision with no fatalities or injuries and at least \$1,000 in damage

Sources: Indiana State Police Vehicle Crash Records System, April 9, 2007

Indiana Bureau of Motor Vehicles 2006 data, February 12, 2007

Table 3: Indiana driver injuries, 2003-2006

Injury type	2003	2004	2005	2006	% change 2003-2006
Fatalities					
All drivers	554	644	661	607	9.6
Young drivers	83	99	81	89	7.2
% young drivers	15.0	15.4	12.3	14.7	-2.1
Incapacitating injuries					
All drivers	2,922	2,740	2,559	2,575	-11.9
Young drivers	495	436	401	382	-22.8
% young drivers	16.9	15.9	15.7	14.8	-12.4
Non-incapacitating injuries*					
All drivers	37,096	40,452	39,049	35,839	-3.4
Young drivers	7,227	7,713	7,146	6,712	-7.1
% young drivers	19.5	19.1	18.3	18.7	-3.7

Notes: *Includes 'non-incapacitating' and 'possible' injury categories

Counts include only drivers with a valid vehicle type listed on the collision report

Sources: Indiana State Police Vehicle Crash Records System, April 9, 2007

Licensed drivers: 2003-2005: Federal Highway Administration, *State Transportation Statistics*
Indiana Bureau of Motor Vehicles 2006 data, February 12, 2007

⁸For the purposes of this fact sheet, 'older drivers' are of age 21 and above.

⁹Non-incapacitating injuries includes counts from the 'possible' injury category.

Table 4: Most common citations issued to young drivers Indiana collisions, 2006

Indiana code*	Citation description	Number issued to			Citation rates (per 100,000 licensed drivers)			Young driver incidence factor***
		All drivers**	Young drivers (< 21)	Older drivers (21+)	All drivers	Young drivers (< 21)	Older drivers (21+)	
7.1-5-7	Age (i.e., Minor) violation	264	259	4	5	83	< 1	n/a
9-21-5	Speed limit violation	1,615	515	1,097	30	166	22	8
9-21-8	Vehicle operation violations	6,509	1,615	4,875	122	520	97	5
9-24-7	Learner permit violation	347	240	105	7	77	2	37
9-24-18	Driving without a license	2,384	791	1,529	45	255	31	8
9-24-19	Driving with suspended/revoked license	4,512	499	4,002	85	161	80	2
9-25-8	No financial responsibility (insurance)	4,196	839	3,338	79	270	67	4
9-26-1	Accident responsibility violation	3,826	837	2,945	72	269	59	5
9-30-5	Operating while intoxicated (OWI)	7,772	843	6,896	146	271	138	2
Other	Other violations	8,628	1,685	6,868	162	542	137	4

Notes: * IC 7.1-5-7 and 9-24-7 are typically issued to young drivers only. Counts for older drivers might reflect rare instances or invalid data.
 ** Includes counts of drivers with missing or invalid ages on the collision report. Young- and Older-drivers may not total to 'All drivers'
 *** Defined as the ratio of the citation rate of young drivers to the citation rate of older drivers

Sources:

Indiana State Police Vehicle Crash Records System, April 9, 2007
 Indiana Bureau of Motor Vehicles 2006 data, February 12, 2007

for vehicle operation violations, and 791 for invalid- or no-license violations (see Table 4). Per 100,000 licensed young drivers, vehicle operation violations (e.g., following too close, improper passing, disregarding a traffic signal) were issued to young drivers five times more often than to older drivers (520 per 100,000 licensed young drivers versus 97 per 100,000 licensed older drivers). Citations involving speeding and 'driving without a license' were issued to young drivers eight times more often than to older drivers. In 2006, 1,530 driver license violations (i.e., learner permit violation, driving without a license, and driving with suspended/revoked license) were issued to young drivers. However, this number may undercount its true extent. An analysis of nationwide collision data from 1998 to 2002 found that 70 percent of unlicensed young drivers in collisions were not issued a citation for that violation.¹⁰

Data on driver contributing factors to collisions also support research findings on the effects and perceptions of driving behavior among young drivers.¹¹ Indiana collision data suggest that drivers under 21 are more likely to be distracted and to engage in errant or erratic driving behavior (see Table 5).

Table 5: Driver contributing factors in Indiana collisions, 2006

Factor*	Young drivers		Older driver		Young driver incidence risk factor**
	Count of drivers	% all factors	Count of drivers	% all factors	
Driver impaired					
All hours	1,652	3.3	10,119	4.4	0.7
6am-6pm	509	1.0	3,605	1.6	0.6
6pm-6am	1,143	2.3	6,514	2.8	0.8
Driver distracted					
All hours	2,453	4.9	6,764	2.9	1.7
6am-6pm	1,626	3.2	5,015	2.2	1.5
6pm-6am	827	1.6	1,749	0.8	2.2
Errant/risky driving					
All hours	29,840	59.3	96,814	42.1	1.4
6am-6pm	19,955	39.7	72,241	31.4	1.3
6pm-6am	9,885	19.7	24,573	10.7	1.8
Driver not a factor					
All hours	16,360	32.5	116,175	50.5	0.6
6am-6pm	10,927	21.7	84,449	36.7	0.6
6pm-6am	5,433	10.8	31,726	13.8	0.8

Notes: * Driver contributing circumstances (factors) grouped as follows:

- Driver impaired 'Alcoholic beverages', 'Driver Asleep or Fatigued', 'Driver Illness', 'Illegal Drugs', 'Prescription Drugs'
- Driver distracted 'Cell Phone Usage', 'Driver Distracted (Explained in Narrative)', 'Other Telematics in Use', 'Passenger Distraction'
- Errant/risky driving 'Disregard Signal/Reg Sign', 'Failure to Yield Right of Way', 'Following Too Closely', 'Improper Lane Usage', 'Improper Passing', 'Improper Turning', 'Jackknifing', 'Left of Center', 'Overcorrecting/Oversteering', 'Ran Off Road Left', 'Ran Off Road Right', 'Speed too Fast for Weather Conditions', 'Unsafe Backing', 'Unsafe Speed', 'Wrong Way on One Way'

** Defined as the ratio of '% all factors (young drivers)' to '% all factors (older drivers)'

Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

⁹Insurance Institute for Highway Safety. *Fatality facts 2005, teenagers*. Arlington, VA.; Massie, D. L., Campbell, K. L., & Williams, A. F. (1995). Traffic involvement rates by driver age and gender. *Accident Analysis and Prevention*, 27(1), 73-87.; NHTSA, 2007; Gregersen, N. P. (1996). Young drivers' overestimation of their own skill - an experiment on the relation between training strategy and skill. *Accident Analysis and Prevention*, 28(2), 243-250.

¹⁰Hanna, C. L., Taylor, M. T., Sheppard, M. A., & Laflamme, L. (2006). Fatal crashes involving young unlicensed drivers in the U.S. *Journal of Safety Research*, 37, 385-393.

¹¹Simons-Morton, B., Lerner, N., & Singer, J. (2005). The observed effects of teenage passengers on the risky driving behavior of teenage drivers. *Accident Analysis and Prevention*, 37, 973-982.; Doherty, S. T., Andrey, J. C., & MacGregor, C. (1998). The situational risks of young drivers: The influence of passengers, time of day and day of week on accident rates. *Accident Analysis and Prevention*, 30(1), 45-52; Children's Hospital of Philadelphia. (2007). *Driving: Through the eyes of teens*. Philadelphia, PA. Retrieved March 10, 2007 from <http://www.chop.edu/injury>



Specifically, in 2006, a young driver was 1.7 times more likely to be distracted and 1.4 times more likely to drive errantly or erratically than is a driver over 21. Differences in risk factors increase during nighttime hours (6pm to 6am). In 2006, of the 1,652 young drivers in collisions that were impaired (via alcohol, drugs, fatigue, or illness), 69.2 percent (1,143) were involved in a nighttime collision. Errant, risky, and distracted driving were more common (in nominal counts) during daytime hours (6am to 6pm) whereas impaired driving increased proportionally during nighttime hours.¹² Indiana collision data suggest that young drivers are more likely to contribute to collision occurrence than older drivers; 21.7 percent of drivers younger than 21 were listed as not contributing to daytime collisions, compared to 36.7 percent for drivers older than 21.

Indiana collision data show that the proportion of young drivers involved in collisions with at least one passenger in the vehicle is higher than that of older drivers (see Table 6). In 2006, 36.6 percent (18,995) of young drivers involved in collisions had passengers in the vehicle, compared to 28.7 percent (69,752) for older drivers. In fatal collisions, 43.0 percent (77) of young drivers were with at least one passenger, compared to 28.7 percent (303) of older drivers who had at least one passenger. These differences also hold for single- and multiple-vehicle collisions

Table 6: Drivers in Indiana collisions, by passenger presence, 2006

Drivers in...	Young drivers		Older drivers	
	Total	Fatal	Total	Fatal
all collisions				
with passengers	18,995	26	69,752	92
without passengers	32,892	63	173,359	425
% with passengers	36.6	29.2	28.7	17.8
fatal collisions				
with passengers	77	26	303	92
without passengers	102	63	751	425
% with passengers	43.0	29.2	28.7	17.8
single vehicle collisions				
with passengers	3,909	15	12,235	52
without passengers	7,482	35	34,020	200
% with passengers	34.3	30.0	26.5	20.6
multiple vehicle collisions				
with passengers	15,086	11	57,517	40
without passengers	25,410	28	139,339	225
% with passengers	37.3	28.2	29.2	15.1

Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

and for the proportion of drivers killed in collisions when passengers were present. These data seem to corroborate the effects of peer-influences on driving behavior.¹³

Restraint use

Of the 80 young drivers killed in collisions for which restraint use was known, 36.3 percent (29) were restrained, compared to 95.2 percent who were restrained and survived (see Table 7). There was only a minor difference in restraint use among young drivers involved in nighttime collisions (93.7 percent) versus daytime collisions (95.9 percent). The effect of alcohol use was more significant, as restraint use dropped from 95.6 percent to 78.1 percent when young drivers were drinking. Approximately 95.0 percent of drivers for whom restraint use was known did use restraints, regardless of time of day and passenger presence.

Table 7: Restraint use among young drivers in Indiana collisions, 2006

	Total young drivers*	Restrained	% restrained
All collisions	46,696	44,447	95.2
Killed	80	29	36.3
By time of day			
Daytime (6am-6pm)	31,373	30,094	95.9
Nighttime (6pm-6am)	15,260	14,295	93.7
By driver alcohol use			
Had been drinking**	1,201	938	78.1
Had not been drinking	45,495	43,509	95.6
By occupant presence			
With passengers	17,128	16,332	95.4
Without passengers	29,568	28,115	95.1

Notes: * Counts include only drivers for whom restraint use was known and marked on the collision report

** Defined when any one of the following conditions are met: (1) 'Alcoholic beverages' was listed as a driver contributing circumstance; (2) driver had a positive blood alcohol content (BAC) test result, (3) as a measure of apparent physical condition, the officer determined that driver had been drinking, or (4) an Operating While Intoxicated (OWI) citation was issued to the driver

Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

Alcohol-related collisions

In 2006, 1,539 young drivers involved in Indiana collisions had been drinking (see Table 8).¹⁴ Of those who had been drinking, 34.4 percent (530) were intoxicated (blood alcohol content of 0.08 grams per deciliter or above). Male young drivers in collisions were 2.3 times as likely to have been drinking as female drivers (3.9 percent of all male young drivers versus 1.7

¹²This finding might be a function of collision report business rules, in that a reporting officer may enter up to, but not more than, two factors per driver. For instance, if a driver involved in a collision had been drinking and speeding, those factors would likely be included in place of a seemingly minor contributing factor like 'Improper Lane Usage'. As such, certain factors are likely under-counted in collision reporting.

¹³Simons-Morton, et al. (2005).

¹⁴A driver is categorized as 'had been drinking' when any one of the following conditions are met: (1) 'Alcoholic beverages' was listed as a driver contributing circumstance; (2) driver had a positive blood alcohol content (BAC) test result, (3) as a measure of apparent physical condition, the officer determined that driver had been drinking, or (4) an Operating While Intoxicated (OWI) citation was issued to the driver. Condition (2) is the NHTSA definition of 'alcohol-related'; the other conditions are included here to compensate for recognized under-reporting of alcohol test results in Indiana and un-standardized data from collision reports.

Table 8: Young drivers and alcohol use, 2006

	All young drivers*	Had been drinking**		Intoxicated***	
		Count	% of all young drivers	Count	% of 'had been drinking'
All collisions	51,887	1,539	3.0	530	34.4
Male drivers	27,739	1,090	3.9	408	37.4
Female drivers	23,934	412	1.7	117	28.4
Driver fatalities	89	10	11.2	9	90.0
Restrained	29	1	3.4	1	11.1
Male drivers	17	1	5.9	1	11.1
Female drivers	12	0	0.0	0	0.0
Not restrained	51	8	15.7	7	77.8
Male drivers	33	8	24.2	7	77.8
Female drivers	18	0	0.0	0	0.0
Curfew hour collisions****	895	105	11.7	39	37.1
Male drivers	517	81	15.7	30	37.0
Female drivers	369	24	6.5	9	37.5

Notes: *Sum of male and female drivers may not equal total due to cases of unreported gender

**Defined when any one of the following conditions are met: (1) 'Alcoholic beverages' was listed as a driver contributing circumstance; (2) driver had a positive blood alcohol content (BAC) test result, (3) as a measure of apparent physical condition, the officer determined that driver had been drinking, or (4) an Operating While Intoxicated (OWI) citation was issued to the driver

***Defined as a BAC test result greater than 0.08 g/dL

****Defined as 11pm-5am all week for 15 year-olds, 11pm-5am Sun-Thu and 1am-5am Fri-Sat for 16 and 17 year-olds

Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

percent of all female young drivers). Of 89 young drivers killed in Indiana collisions in 2006, 11.2 percent (10) had been drinking. Of the 10 young drivers who were killed in collisions and had been drinking in 2006, only one was restrained. All fatalities among young drivers where the driver had been drinking were male. Among curfew-hour collisions (defined for driver ages 15 to 17), 11.7 percent (105) of the young driv-

ers had been drinking and 37.1 percent (39) of those drinking were intoxicated. Of all young drivers in curfew-hour collisions, males (15.7 percent) were 2.4 times as likely to have been drinking as females (6.5 percent).

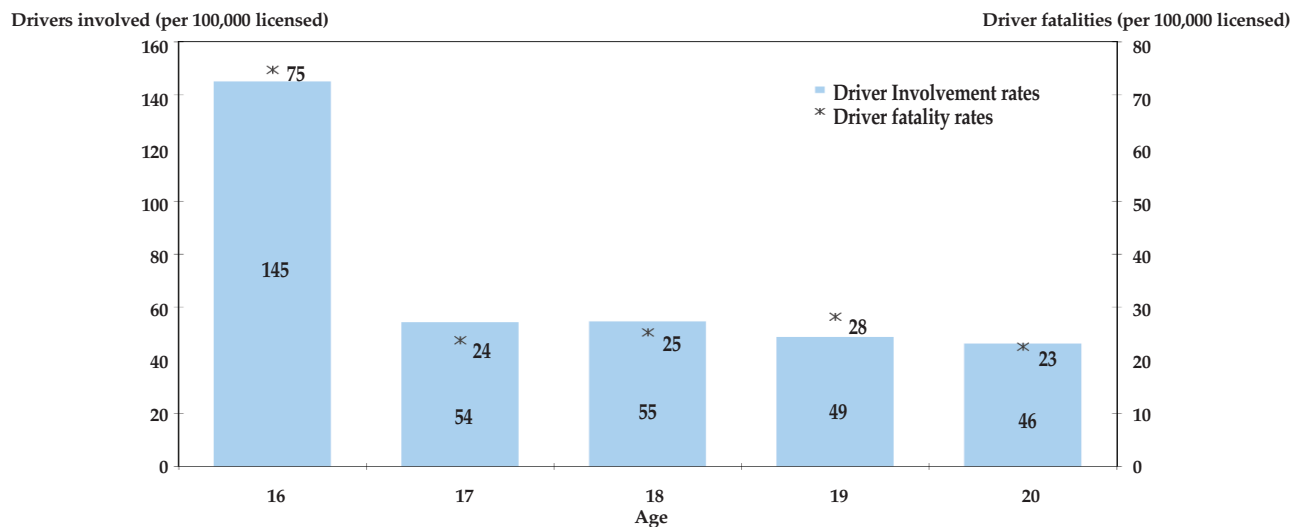
Driver training and licensing standards

Indiana collision data suggest that, per 100,000 licensed drivers, driving experience is directly related to collision- and fatal-risk involvement (see Figure 1). In 2006, 16 year-old drivers were three times as likely to be involved in fatal collisions and to be killed as all other young driver ages (17 to 20).

To address this issue, a consortium of national traffic safety groups developed and now recommend a three-stage graduated driver licensing system (GDL) to minimize the risk exposure of young drivers. The first stage requires driving training, restricts vehicle occupants and driving hours, and requires collision-free driving for a defined period of time. The second stage mandates further driver training and supervised practice. The final stage, pending successful completion of the other stages, grants full licensure to the driver. As of February 2007, 45 states have adopted some variant of this three-stage system.¹⁵

Indiana has a two-stage licensing system that requires a two-month learner permit period for 15 year-olds with supervised driving (Stage 1) and curfew-hour restrictions and a 90-day period without passengers for 16 and 17 year-olds (Stage 2). The Insurance Institute for Highway Safety (IIHS) provides a point-based rating system for state GDL systems. In general, points are awarded for more stringent licensing programs,

Figure 1. Young driver (ages 16 to 20) involvement rates in fatal collisions in Indiana, 2006



Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

¹⁵NHTSA, 2007.



based on minimum-age qualifications, nighttime and passenger restrictions, and driver training effectiveness. Overall ratings range from “Good” to “Poor.” The Indiana state program has been designated as “Fair.”¹⁶

Research has associated GDL programs with declines in collision rates among younger drivers. An analysis of the Florida GDL system found a nine percent reduction in crash involvement rates in Florida after the first year of GDL implementation.¹⁷ A study of GDL effects on collision and hospitalization rates among young drivers in traffic collisions in North Carolina found an 18 percent decline in total collisions for 16 year-olds, a 36.5 percent decline in hospitalization rates, and an estimated \$650,000 in avoided hospitalization charges.¹⁸ A nationwide review of the impact of GDL systems on 16 year-old drivers found that the most effective policies include a three-month waiting period between the first and second stages, restrictions on passengers and nighttime driving, and a significant amount of supervised training.¹⁹

Indiana county comparisons

In 2006, a county average of about 23 young drivers per 1,000 licensed was involved in fatal or injury collisions in Indiana during daytime hours, compared to about 13 for nighttime hours (see Map 1).²⁰ In comparing collisions between 2003 and 2006, the number of young drivers involved in daytime collisions per 1,000 licensed increased in 41 counties (those shaded in green on the map) and decreased in 51 (those shaded in blue). During nighttime hours, increases occurred in 45 counties. In particular, young driver involvement rates in

Monroe, Vigo, and Tippecanoe counties were in the top five in both daytime and nighttime hours (over 40.0 and 20.0, respectively). In 2006, the rate of young drivers involved in Sullivan County during daytime hours was over eight times higher than in 2003 and 1.4 times higher than in 2003 during nighttime hours. Young driver involvement in Boone and Greene counties increased over 200 percent during daytime and nighttime hours, respectively. These results highlight areas of concern in Indiana, but should be interpreted with caution as large changes over time might reflect low overall counts or other associated factors not accounted for here.

Summary

Though young driver fatalities in traffic collisions have decreased significantly in the last 10 years, the involvement rate of this age group is considerably higher than that of older drivers. Based on Indiana collision data from 2003 to 2006, drivers under age 21 were more likely to be distracted and to contribute to collision occurrence. Factors that contribute to the high involvement of young drivers include a lack of driving experience, risky driving behavior, in-vehicle distractions, and impaired driving. Restraint use among young drivers in fatal collisions was lower than that of older drivers, especially when alcohol was involved. Male young drivers were at a greater risk for serious collisions and were over twice as likely to have been drinking as female young drivers. Graduated driver licensing programs have been shown to reduce collisions and hospitalization rates by minimizing exposure to high risk situations, such as passenger presence and nighttime driving.

¹⁶Insurance Institute for Highway Safety. (March, 2007). *U.S. licensing systems for young drivers*. Arlington, VA.¹⁷Ulmer, R. G., Preusser, D. F., Williams, A. F., Ferguson, S. A., & Farmer, C. M. (2000). Effect of Florida’s graduated licensing program on the crash rate of teenage drivers. *Accident Analysis and Prevention*, 32, 527-532.

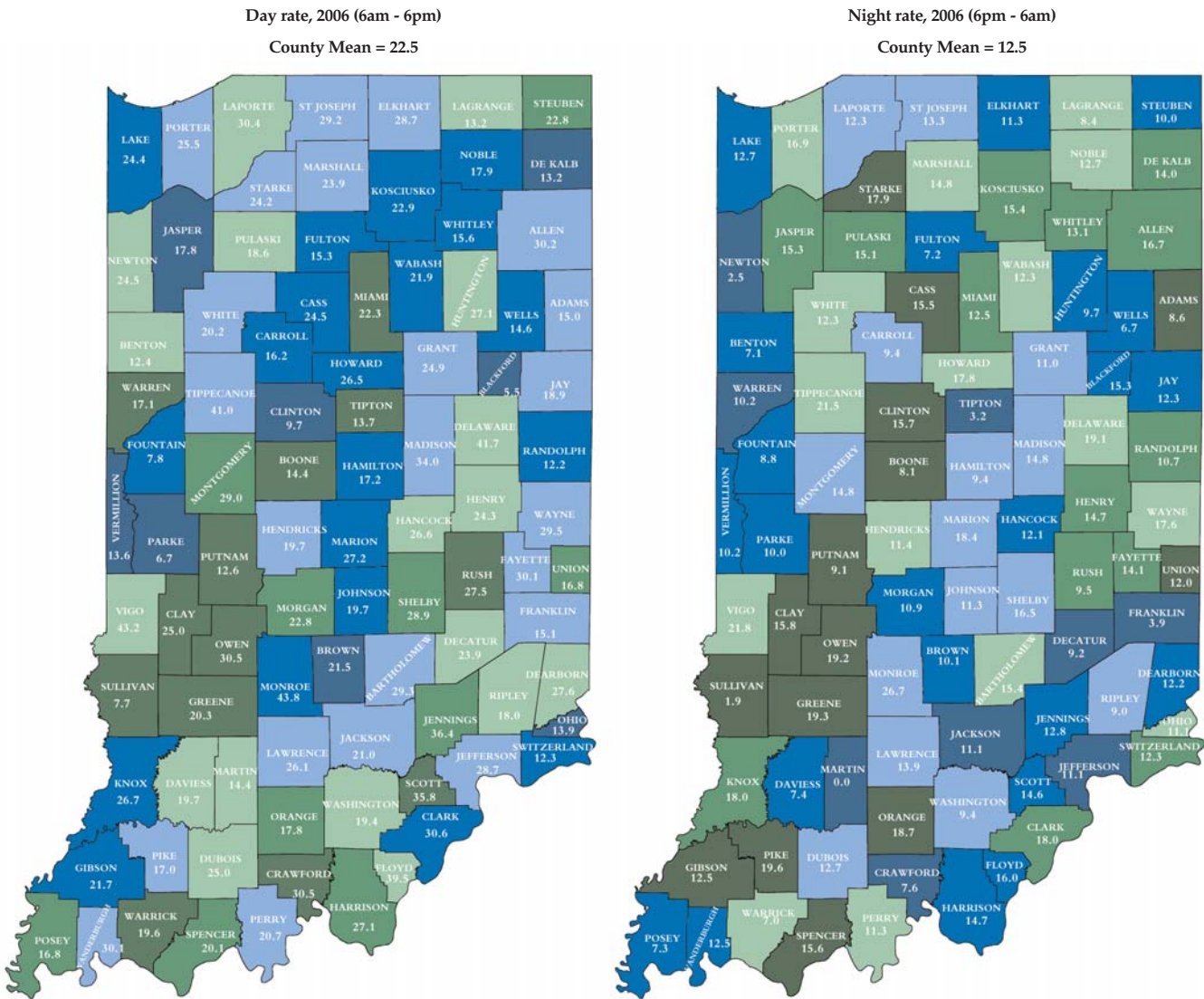
¹⁷Ulmer, R. G., Preusser, D. F., Williams, A. F., Ferguson, S. A., & Farmer, C. M. (2000). Effect of Florida’s graduated licensing program on the crash rate of teenage drivers. *Accident Analysis and Prevention*, 32, 527-532.

¹⁸Margolis, L. H., Masten, S. V., & Foss, R. D. (2007). The effects of graduated driver licensing on hospitalization rates and charges for 16- and 17-year-olds in North Carolina. *Traffic Injury Prevention*, 8, 35-38.

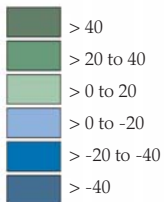
¹⁹National Highway Traffic Safety Administration. (June 2006). *National evaluation of graduated driver licensing programs*. Washington, D.C. (DOT HS 810 614).

²⁰Daytime hours defined as 6am to 6pm; nighttime hours defined as 6pm to 6am. The difference in involvement rates between daytime and nighttime hours is most likely due to the expected decrease in vehicle-miles traveled (VMT) during.

Map 1: Young drivers involved in Indiana fatal/injury collisions in 2006, per 1,000 licensed young drivers, and percent change in involvement rates, 2003 - 2006.



Percent change in involvement rates, 2003 to 2006



Source: Indiana State Police Vehicle Crash Records System, April 9, 2007

INDIANA TRAFFIC SAFETY FACTS



This publication was prepared on behalf of the Indiana Criminal Justice Institute by the Center for Urban Policy and the Environment. Please direct any questions concerning data in this document to ICJI at 317-232-1233.

This publication is one of a series of Fact Sheets that, along with the annual Indiana Crash Fact Book, form the analytical foundation of traffic safety program planning and design in the state of Indiana. Funding for these publications is provided by the Indiana Criminal Justice Institute and the National Highway Traffic Safety Administration.

An electronic copy of this document can be accessed via the Center website (www.urbancenter.iupui.edu/trafficsafety/), the ICJI traffic safety website (www.in.gov/cji/traffic/), or you may contact the Center for Urban Policy and the Environment at 317-261-3000.

The Indiana Criminal Justice Institute (ICJI)

Guided by a Board of Trustees representing all components of Indiana's criminal and juvenile justice systems, the Indiana Criminal Justice Institute serves as the state's planning agency for criminal justice, juvenile justice, traffic safety, and victim services. ICJI develops long-range strategies for the effective administration of Indiana's criminal and juvenile justice systems and administers federal and state funds to carry out these strategies.

The Governor's Council on Impaired & Dangerous Driving

The Governor's Council on Impaired & Dangerous Driving, a division of the Indiana Criminal Justice Institute, serves as the public opinion catalyst and the implementing body for statewide action to reduce death and injury on Indiana roadways. The Council provides grant funding, training, coordination and ongoing support to state and local traffic safety advocates.

The Center for Urban Policy and the Environment

The Indiana University Center for Urban Policy and the Environment is devoted to supporting economic success for Indiana and a high quality of life for all Hoosiers. An applied research organization, the Center was created by the Indiana University School of Public and Environmental Affairs in 1992. The Center works in partnership with community leaders, business and civic organizations, nonprofits, and government. The Center's work is focused on urban and community development, health policy, and criminal justice research essential to developing strategies to strengthen Indiana's economy and quality of life.

The National Highway Traffic Safety Administration (NHTSA)

NHTSA provides leadership to the motor vehicle and highway safety community through the development of innovative approaches to reducing motor vehicle crashes and injuries. The mission of NHTSA is to save lives, prevent injuries and reduce economic costs due to road traffic crashes, through education, research, safety standards and enforcement activity.

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CENTER FOR URBAN POLICY
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